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10/590,584

08/24/2006

Malcolm Bruce Gordon

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EXAMINER

UPTON, CHRISTOPHER

ART UNIT

PAPER NUMBER

1797

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PAPER

Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

| | | | |
|------------------------------|--------------------------------------|--------------------------------------|--|
| Office Action Summary | Application No. 10/590,584 | Applicant(s) GORDON ET AL. | |
| | Examiner Christopher Upton | Art Unit 1797 | |

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☐ Responsive to communication(s) filed on ____.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-18 is/are pending in the application.
4a) Of the above claim(s) ____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) ____ is/are allowed.
- 6) ☒ Claim(s) 1-7 and 9-18 is/are rejected.
- 7) ☒ Claim(s) 8 is/are objected to.
- 8) ☐ Claim(s) ____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 24 August 2006 is/are: a) ☐ accepted or b) ☒ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
a) ☒ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
 2. ☐ Certified copies of the priority documents have been received in Application No. ____.
 3. ☒ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|--|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413) Paper No(s)/Mail Date. ____. |
| 2) <input type="checkbox"/> Notice of Draftperson's Patent Drawing Review (PTO-948) | 5) <input type="checkbox"/> Notice of Informal Patent Application |
| 3) <input checked="" type="checkbox"/> Information Disclosure Statement(s) (PTO/SB/08) Paper No(s)/Mail Date <u>8/24/06</u> . | 6) <input type="checkbox"/> Other: ____. |

1. The drawings are objected to under 37 CFR 1.83(a). The drawings must show every feature of the invention specified in the claims. Therefore, the sockets of claims 17 and 18 must be shown or the feature(s) canceled from the claim(s). No new matter should be entered.

Corrected drawing sheets in compliance with 37 CFR 1.121(d) are required in reply to the Office action to avoid abandonment of the application. Any amended replacement drawing sheet should include all of the figures appearing on the immediate prior version of the sheet, even if only one figure is being amended. The figure or figure number of an amended drawing should not be labeled as "amended." If a drawing figure is to be canceled, the appropriate figure must be removed from the replacement sheet, and where necessary, the remaining figures must be renumbered and appropriate changes made to the brief description of the several views of the drawings for consistency. Additional replacement sheets may be necessary to show the renumbering of the remaining figures. Each drawing sheet submitted after the filing date of an application must be labeled in the top margin as either "Replacement Sheet" or "New Sheet" pursuant to 37 CFR 1.121(d). If the changes are not accepted by the examiner, the applicant will be notified and informed of any required corrective action in the next Office action. The objection to the drawings will not be held in abeyance.

2. The disclosure is objected to because of the following informalities: It appears that "inorganic" is used to describe "synthetic." For example, on page 3 of the

specification, "inorganic" is used to describe PVC, polyethylene and polypropylene, which are synthetic organic polymers.

Appropriate correction is required.

3. The following is a quotation of the second paragraph of 35 U.S.C. 112:

The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

4. Claims 7, 12-14 and 16-18 are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

Claim 7 repeats the "particulate" of parent claim 5. In claim 12, it is unclear as to how the water enters the cartridge to trickle down the canister. The structure as a whole of claims 17 and 18 is unclear, as it is unclear as to how the elements structurally relate to each other as a complete device, and an inlet is required for there to be an outlet.

5. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

(e) the invention was described in (1) an application for patent, published under section 122(b), by another filed in the United States before the invention by the applicant for patent or (2) a patent granted on an application for patent by another filed in the United States before the invention by the applicant for patent, except that an international application filed under the treaty defined in section 351(a) shall have the effects for purposes of this subsection of an application filed in the United States only if the international application designated the United States and was published under Article 21(2) of such treaty in the English language.

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

6. Claims 1-5 and 7 are rejected under 35 U.S.C. 102(b) as being anticipated by Boyd, Pare, Buelna or Cameron.

Claims 1-5 and 7 are rejected under 35 U.S.C. 102(e) as being anticipated by Talbot (2004/0124139).

Boyd, Pare, Buelna, Cameron and the 2004 Talbot publication each disclose an aerobic water treatment system having a bacterial support of a natural organic substance, such as peat (see column 4, lines 55 et seq of Boyd, column 8, lines 10-12 of Pare, Table 1 of Buelna, paragraph 44 of Cameron, and paragraph 57 of Talbot) mixed with another flow control component, such as a fibrous material (Boyd), straw (Pare), wood shavings and/or tree bark (Buelna), cut corrugated plastic pipe (Cameron), or coconut mesocarp (Talbot), as claimed.

7. Claims 1-4 are rejected under 35 U.S.C. 102(b) as being anticipated by Talbot (6,602,407).

Talbot discloses an aerobic water treatment system having a bacterial support comprising peat particles (column 6, lines 55-58) layered with a geotextile fiber flow control component (column 6, lines 50-54). While the two components are in distinct

layers, it is submitted that the juxtaposition of multiple layers results in the bed as a whole forming a "mixture," as claimed.

8. Claims 6 and 9-11 are rejected under 35 U.S.C. 103(a) as being unpatentable over Boyd, Pare, Buelna, Cameron or Talbot (2004/0124139).

Claims 9-11 are rejected under 35 U.S.C. 103(a) as being unpatentable over Talbot (6,602,407).

Claims 6 and 9-11 differ from Boyd, Pare, Buelna, Cameron and Talbot in recitation of the specific surface area of the flow control component and the mixture, respectively. It is submitted that the flow control materials of the references are all obviously high, due to the irregular structure of all of the components and the porosity of all those except for the plastic pipe; and that the specific surface area would obviously depend on various factors, such as the size and irregularity of the particles used, and therefore this recitation fails to patentably distinguish over the prior art, absent a declaration of unexpected results. It is also noted that Buelna discloses that the peat used has a specific surface of about 200 square meters per gram, and that there are about 100 kilograms in a cubic meter (column 9, lines 8-15).

9. Claim 15 is rejected under 35 U.S.C. 103(a) as being unpatentable over Boyd, Pare, Buelna, Cameron or Talbot (both), each in view of Cawley or Festa.

Claim 15 differs from the references in recitation of both a collection reservoir for receiving the water to be treated and a storage reservoir for receiving treated water. This is well known in the art of wastewater treatment, as exemplified by Cawley and

Festa, and would therefore have been an obvious addition to the references, to provide dosing and storage prior to reuse or disposal. (Note also that Boyd discloses a collection reservoir in the form of a septic tank and that Cameron discloses a storage sump for the treated water).

10. Claims 1-7, 9, 10, and 15 are rejected under 35 U.S.C. 102(b) as being anticipated by Festa.

Festa discloses an aerobic water treatment system having natural particulates, including peat (see paragraph 24) mixed with a flow control component having a specific surface of up to 390 square meters per cubic meter (see Table 1), with a septic tank collection reservoir and a receiving pump tank, as claimed.

11. Claim 11 is rejected under 35 U.S.C. 103(a) as being unpatentable over Festa.

Claim recites a specific range of the ratio of peat to the flow control component of 1:4 to 2:1, or 20-67%. Since Festa discloses that the flow component should be at least 5%, it is submitted that this range fails to patentably distinguish over Festa.

12. Claim 8 is objected to as being dependent upon a rejected base claim, but would be allowable if rewritten in independent form including all of the limitations of the base claim and any intervening claims.

Claims 12-14, 16 and 18 would be allowable if rewritten to overcome the rejection(s) under 35 U.S.C. 112, 2nd paragraph, set forth in this Office action and to include all of the limitations of the base claim and any intervening claims.

The recitation of an aerobic wastewater treatment method or column comprising a bed of a mixture of a natural particulate organic substance with a separate flow control component in combination with a separate upper canister of a media having a high specific surface area to provide for aeration prior to passing through the mixed bed patentably distinguishes over the prior art of record.

13. Claim 17 would be allowable if rewritten to overcome the rejection(s) under 35 U.S.C. 112, 2nd paragraph, set forth in this Office action and to include all of the limitations of the base claim and any intervening claims.

The recitation of a plurality of columns of a mixture of a natural particulate organic substance with a separate flow control component, each mounted on its own air spigot on the base of a single container patentably distinguishes over the prior art of record.

14. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure. Other references of interest include the plural canister systems of Gray, Carroll, Carothers, Sing and Conrad; the media of Takarabe and Sanyal; and the separate aeration and biofiltration steps of Bernard.

15. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Christopher Upton whose telephone number is 571-272-1169. The examiner can normally be reached on 8:30-6:00, off every other Monday.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Duane Smith can be reached on 571-272-1166. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

/Christopher Upton/
Primary Examiner, Art Unit 1797b

Christopher Upton
Primary Examiner
Art Unit 1797